

ROADWAY SAFETY INSTITUTE

Advancing roadway safety with user-centered solutions

UTC Project Information	
Project Title	Safety Study of I-35W Improvements Done Under UPA Project
University	University of Minnesota
Principal Investigator	Gary Davis
PI Contact Information	drtrips@umn.edu 612-625-2598
Funding Source(s) and Amounts Provided (by each agency or organization)	Minnesota Department of Transportation: \$105,000
Total Project Cost	\$105, 000
Agency ID or Contract Number	UTC Grant Number: DTRT13-G-UTC35 MnDOT contract 99008, work order 151 CTS# 2015005
Start and End Dates	06/05/2014 – 8/31/2017
Brief Description of Research Project	<p><i>Final report abstract:</i></p> <p>As part of an Urban Partnership Agreement project, the Minnesota Department of Transportation added lanes and began operating a priced dynamic shoulder lane (PDSL) on parts of Interstate 35W. Following the opening of these improvements, the frequency of rear-end crashes increased in certain sections, especially in the PDSL region. The object of this study was to determine if these increases were direct effects of the improvements or were due to changes in traffic conditions. Logistic regression analyses which controlled for changes in traffic conditions indicated no direct effect on the likelihood of rear-end crashes due to operation of the PDSL; the observed change in crash frequency was explained by the change in traffic conditions. This study also found evidence for a nonlinear relationship between a proxy for traffic density, lane occupancy, and the probability of a rear-end crash occurring during an hour. In several sections crashes were most likely when lane occupancies were approximately 20%–30%, and crash likelihood tended to decrease for lane occupancies below and above this range.</p>
Describe Implementation of Research Outcomes (or why not implemented)	The Colorado Department of Transportation has shown interest in the research and requested a copy of the final research report.
Place Any Photos Here	

Last updated (9/30/2019)



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Impacts/Benefits of Implementation (actual, not anticipated)	Nothing to report.
Web Links <ul style="list-style-type: none">• Reports• Project website	http://www.roadwaysafety.umn.edu/research/search/projectdetail.html?id=2015005 http://www.roadwaysafety.umn.edu/publications/researchreports/reportdetail.html?id=2598

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